

Application Serial No. 10/791,165
Amendment dated April 21, 2006
Reply to Office Action dated January 10, 2006

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

Claim 2 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 1, characterized by the fact that 44, wherein the contour describing the final geometry of the opening is produced by the separation process.

Claim 3 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 1 whose resources are 44, wherein the retention structure is an integral component of the base plate or [[form]] forms a structural unit with [[them]] the base plate.

Claim 4 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1, characterized by the fact that metal fixing material 44 wherein the bushing comprises at least two said metal pins in parallel arrangement to each other.

Claim 5 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1, characterized by the fact that 44, wherein the metal pin is firmly connected with [[a]] the fixing material yielding a fixing material plug.

Claim 6 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 5, characterized by the fact that wherein the metal pin is sealed with the fixing material.

Claim 7 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1, characterized by the fact that 44, wherein a glass plug formed from molten glass or a high-performance polymer is used as the fixing material.

Claim 8 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1, characterized by the fact that the resources for prevention of a relative motion of fixing

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~~material in the direction of the rear across from the inner circumference of the slot comprise 44, wherein the retention structure comprises at least one undercut arranged between the rear side and the front side viewed from the rear on the inner circumference of the slot opening in the base plate, whereby the front is free from such an undercut.~~

Claim 9 (original): ~~Metal fixing material~~ The bushing according to Claim 8, characterized by the fact that wherein the undercut is formed by at least one projection.

Claim 10 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 9, characterized by the following features wherein:

the slot is characterized by opening has two sub-areas – a first sub-area which extends in a direction from the rear side toward the front side and a second sub-area[[,] which extends in a direction from the front side toward the rear side;

the projection is formed by the second sub-area, which is characterized by has lesser inner dimensions than the first sub-area;

the first and second sub-areas have an unchanging geometry with constant inner dimensions over their length.

Claim 11 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 9, characterized by the following features wherein:

the slot is characterized by opening has two sub-areas – a first sub-area which extends in a direction from the rear side toward the front side and a second sub-area, which extends in a direction from the front side toward the rear side;

the projection is formed by the second sub-area, which is characterized by has lesser inner dimensions than the first sub-area;

the first and/or second sub-areas have a variable geometry and/or different inner dimensions over their length.

Claim 12 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 11, characterized by the fact that wherein the first sub-area is characterized by a reduction of the dimensions starting from the front side to the second sub-area.

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Claim 13 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 11, characterized by the fact that the slot exhibits wherein the opening has a circular cross section and at least the first sub-area, preferably also the second sub-area is tapered.

Claim 14 (currently amended): ~~Metal fixing material~~ The bushing according to claim 8, characterized by the fact that wherein the undercut is centrally arranged.

Claim 15 (currently amended): ~~Metal fixing material~~ The bushing according to claim 8, characterized by the following features wherein:

[[with]] an undercut in the opening is provided in both directions; the slot is characterized by opening has three sub-areas – a first sub-area[[,]] which extends from the rear side toward the front side, a second sub-area adjacent to the first sub-area and a third sub-area[[,]] which extends from the front [[to]] side toward the rear side; the second sub-area is characterized by lesser internal dimensions of the [[slot]] opening than the first and third sub-areas.

Claim 16 (currently amended): ~~Metal fixing material~~ The bushing according to claim 8, characterized by the following features wherein:

[[with]] an undercut in the opening is provided in both directions; the slot is characterized by opening has three sub-areas – a first sub-area[[,]] which extends from the rear side toward the front side, a second sub-area adjacent to the first sub-area and a third sub-area[[,]] which extends from the front [[to]] side toward the rear side; the second sub-area is characterized by greater internal dimensions of the [[slot]] opening than the first and third sub-areas.

Claim 17 (currently amended): ~~Metal fixing material~~ The bushing according to claim 15, characterized by the fact that wherein the first and third sub-areas are characterized by have identical cross section dimensions.

Claim 18 (currently amended): ~~Metal fixing material~~ The bushing according to claim 9, characterized by the fact that wherein a number of projections are provided arranged in

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circumferential direction distanced to each other on a common length between the front and [[the]] rear sides.

Claim 19 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1,
~~characterized by the fact that the slot exhibits 44, wherein the opening has a circular cross section.~~

Claim 20 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1,
~~characterized by the fact the slot exhibits a randomly selectable 44, wherein the opening has a non-circular cross section.~~

Claim 21 (canceled)

Claim 22 (currently amended): ~~Metal fixing material~~ The bushing according to Claim 21,
~~characterized by the fact that 44, wherein the stamped metal [[part]] base plate is polished.~~

Claim 23 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1,
~~characterized by the fact that the resources for prevention of a relative motion of fixing material in the direction of the rear across from the inner circumference of the slot comprise 44, wherein the retention structure comprises~~ at least one positive connection between the fixing material [[plug]] and a part of the [[slot]] opening.

Claim 24 (currently amended): ~~Metal fixing material~~ The bushing according to claim 1,
~~characterized by the fact that the resources comprises 44, wherein the retention structure comprises~~ an element inserted in the [[slot]] opening and the inner circumference of the [[slot]] opening and/or the outer circumference of the element exhibits has a roughness of $\geq 10 \mu\text{m}$.

Claim 25 (currently amended): ~~Metal fixing material~~ A bushing according to claim 1,
~~characterized by the fact that 44, wherein on the metal pin resources are structure is provided~~ for the prevention of a relative motion of the pin opposite relative to the fixing material.

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Claim 26 (currently amended): Metal fixing material The bushing according to Claim 15,
~~characterized by the fact that the resources~~ wherein the structure for prevention of a relative motion of the pin opposite to the fixing material ~~comprise~~ comprises at least one projection in radial direction on the pin.

Claim 27 (currently amended): Metal fixing material The bushing according to Claim 26,
~~characterized by the fact that~~ wherein the projection is an integral component of the pin.

Claim 28 (currently amended): Metal fixing material The bushing according to Claim 26,
~~characterized by the fact that~~ wherein the projection is formed by an element connected to the pin.

Claim 29 (currently amended): Metal fixing material The bushing according to claim 26,
~~characterized by the fact that the resources~~ wherein the structure for the prevention of a relative motion of the pin opposite to the fixing material ~~comprise~~ comprises a number of projections adjoined in axial direction and in radial direction on the pin.

Claim 30 (currently amended): Metal fixing material The bushing according to claim 1,
~~characterized by the fact that~~ 44 wherein at least two metal pins are provided.

Claim 31 (currently amended): Metal fixing material The bushing according to Claim 30,
~~characterized by the fact that the two or more~~ wherein the at least two metal pins are in parallel arrangement to each other.

Claim 32 (currently amended): Metal fixing material The bushing according to claim 30,
~~characterized by the fact that the second metal pin~~ wherein one of the metal pins is grounded to the rear side of the base plate.

Claim 33 (currently amended): Metal fixing material The bushing according to claim 1,
~~characterized by the fact that a~~ 44, including a further metal pin ~~is provided, which is~~

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~~arranged in a slot in the base plate in a fixing material, as well as in~~ a socket of the base plate which is grounded.

Claim 34 (withdrawn): Method for manufacturing a base plate of a metal bushing according claim 1,

in which from one part, in particular a sheet metal part, of predefined thickness the final contour describing the outer geometry is gained by means of a separation process;

in which to form the slot for at least one metal pin the base geometry describing the starting form of the slot is gained by means of punching out of the part, in particular of the sheet metal part.

Claim 35 (withdrawn): Method according to Claim 34, characterized by the fact that the final contour describing the outer geometry gained by the separation process and the base geometry describing the starting form of the slot are produced in one processing step in the form of punching out with a tool.

Claim 36 (withdrawn): Method according to claim 34, characterized by the fact that the undercuts in the slots are formed by deformation of the slot.

Claim 37 (withdrawn): Method according to Claim 36, characterized by the fact that the deformation is achieved by means of at least one stamping operation.

Claim 38 (withdrawn): Method according to claim 36, characterized by the fact that the stamping and punching operations are performed from the same side on the base plate.

Claim 39 (withdrawn): Method according to claim 36, characterized by the fact that the stamping and punching operations are performed from at different sides on the base plate.

Claim 40 (withdrawn): Method according to claim 36, characterized by the fact that the stamping and punching operations are performed on both sides on the base plate.

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Claim 41 (withdrawn): Method according to Claim 40, characterized by the fact that either tools with the same parameters or the same tools are used for stamping and punching.

Claim 42 (withdrawn): Method according to claim 34, characterized by the fact that prior to the punching out of the slot in the area of the slot to be produced on the sheet metal part a stamping operation is performed.

Claim 43 (withdrawn): Method according to claim 34, characterized by the fact that the socket of the base plate is obtained after punching out by means of deep drawing.

Claim 44 (new): A bushing assembly for igniters of airbags or belt tensioner pulleys, comprising:

a stamped metal base plate having an opening therein, said base plate being formed by a single element and said opening being formed by at least one separation process, said base plate having a front side and a rear side;

at least one metal pin extending from the rear side of said base plate and being fixed in said opening by a fixing material in the opening; and

retention structure being provided between the front and rear sides of the base plate for prevention of motion of the fixing material relative to the base in a direction toward the rear side along the inner circumference of the opening.

Claim 45 (new): The bushing assembly of claim 44 wherein the fixing material is a glass plug.